## Exceptional service in the national interest



SNL Energy Storage Demonstration - Commissioning Projects
Funded by Dr. Imre Gyuk

U.S. Department of Energy Office of Electricity Energy Storage Program







GS RESCU unit at Base Camp Integration Lab (BCIL)

ZBB – University of California at San Diego

gqi.nəwoq-sumirq\\20\4\02\2014\\02\pin\moo.sədrof.segemi-sgold\\;qttn

# ES Commissioning Overview

## Sandia National Labs

Dan Borneo. Jaci Hernandez, Ben Schenkman, David Rosewater, Victor Chavez

#### Introduction

Commissioning is a process designed to verify and document that a device, system(s), or facility, meets defined safety and performance specifications.

### <u>Significance</u>

Commissioning is the convergence of design, construction, and a functioning electro-mechanical system. The greatest value of commissioning is that it helps to insure that the system is installed as designed, is safe, and it operates as intended. Some component behaviors, assemblies, or system conditions cannot be discovered through normal installation, building, or contracting check.

#### **Process**

Through testing - Commissioning demonstrates, measures, evaluates and records component and system performance. It is a process that incorporates design review/verification, system specifications, safety, construction inspection, factory witness test and start-up and testing procedures to validate performance and to discover and correct problems before the system is "online".

#### **Key Players**

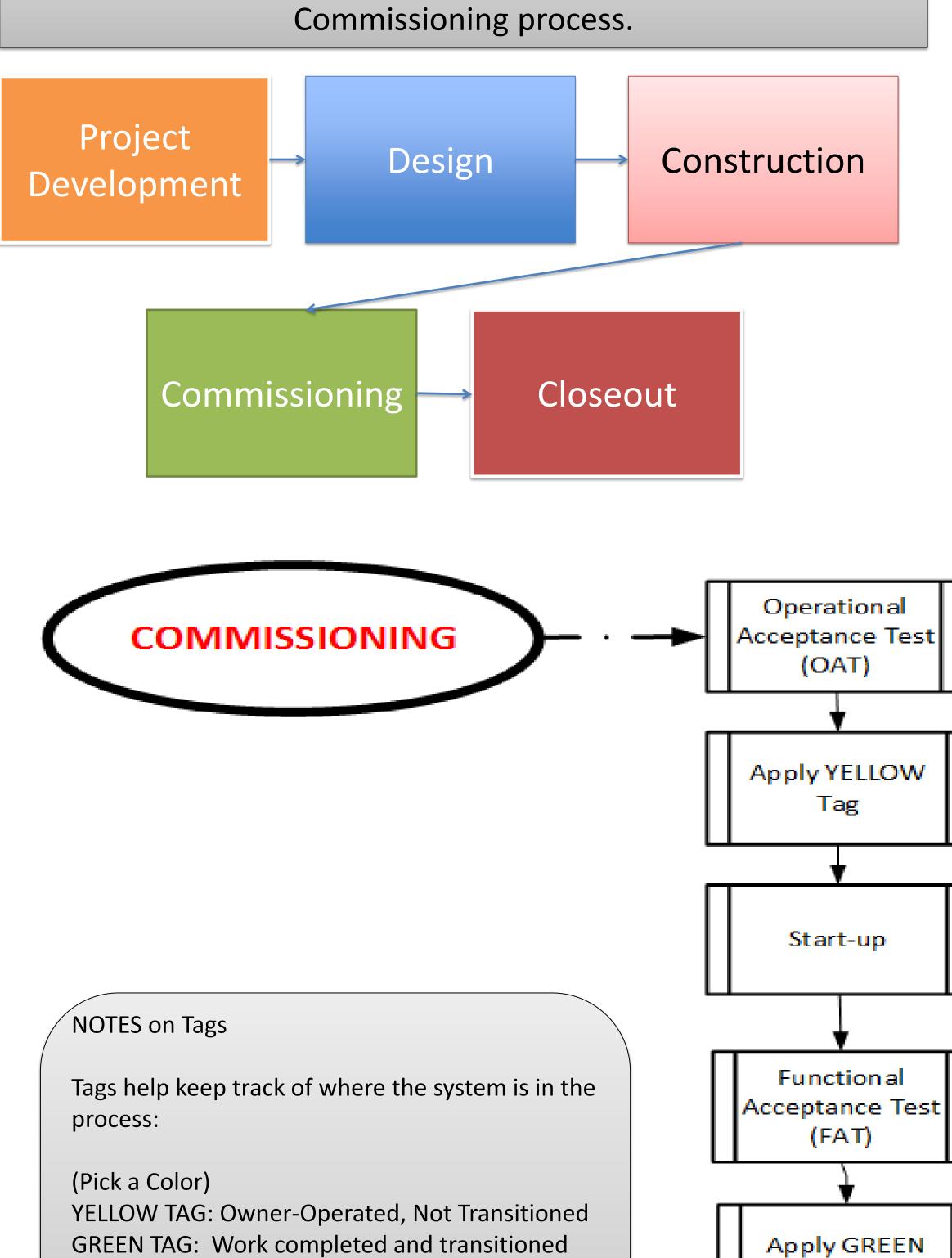
The successful commissioning team is composed of design, construction, operation and vendor personnel who understand the project and performance requirements and can verify that the system:

- Is properly designed and safely installed according to manufacturer's specifications
- Is operational and functional in the intended application

Note: Interested in more information or want to help please contact Dan Borneo drborne@sandia.gov

The COMMISSIONING process starts in Design and is implemented throughout the project

Reliability and safety are the overriding focus of the Commissioning process.



Tag

Shakedown

from construction to operations.

tag is applied.

Note: The yellow tag is removed once a green

The green tag may be removed at the owner's

discretion AFTER the project is completed

